Combination Syndrome

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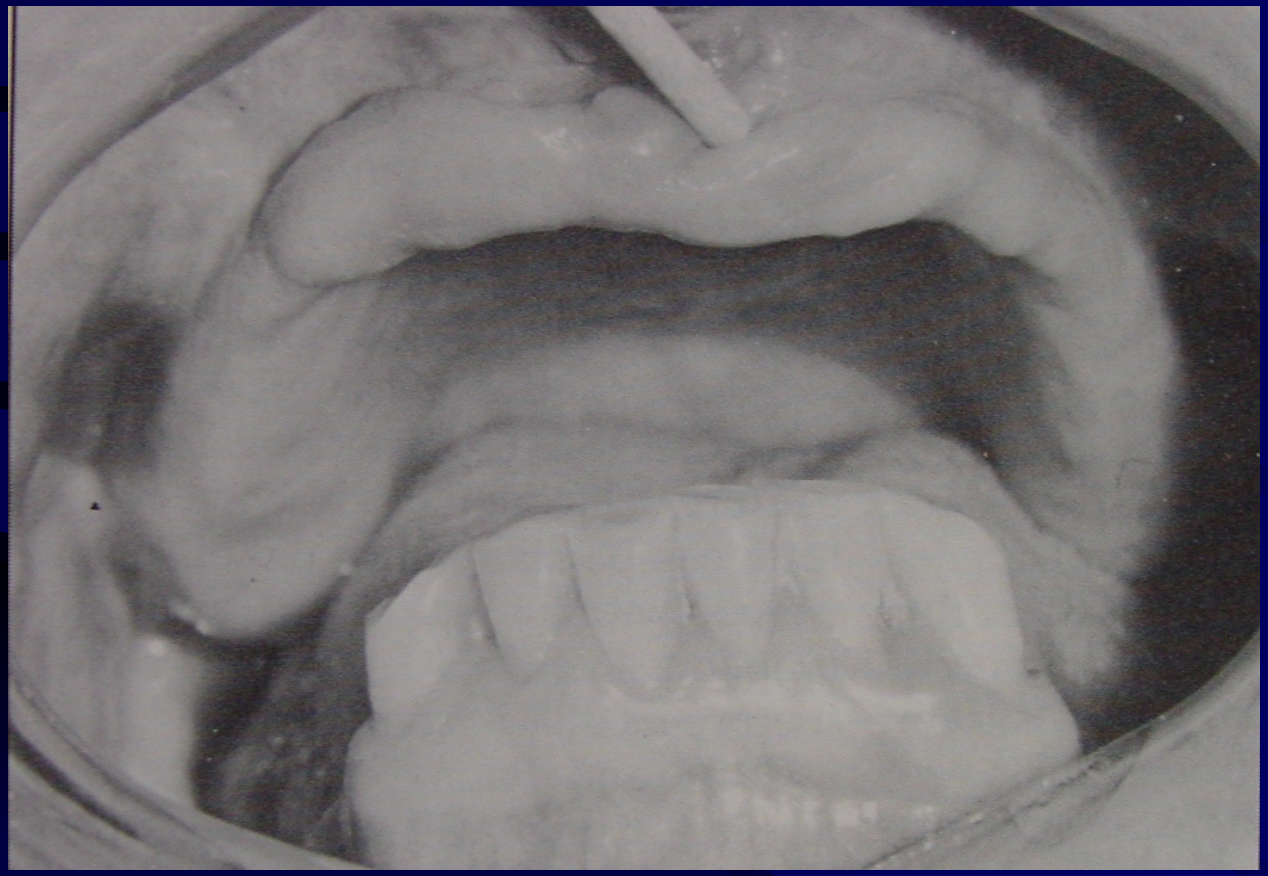
Overview

- Definition
- Description
- Possible mechanism
- Treatment and Prevention
- Maintenance
- Other treatment modalities

Kelly E. Changes caused by a mandibular removable partial denture opposing a maxillary complete denture. J Prosthet Dent (1972)

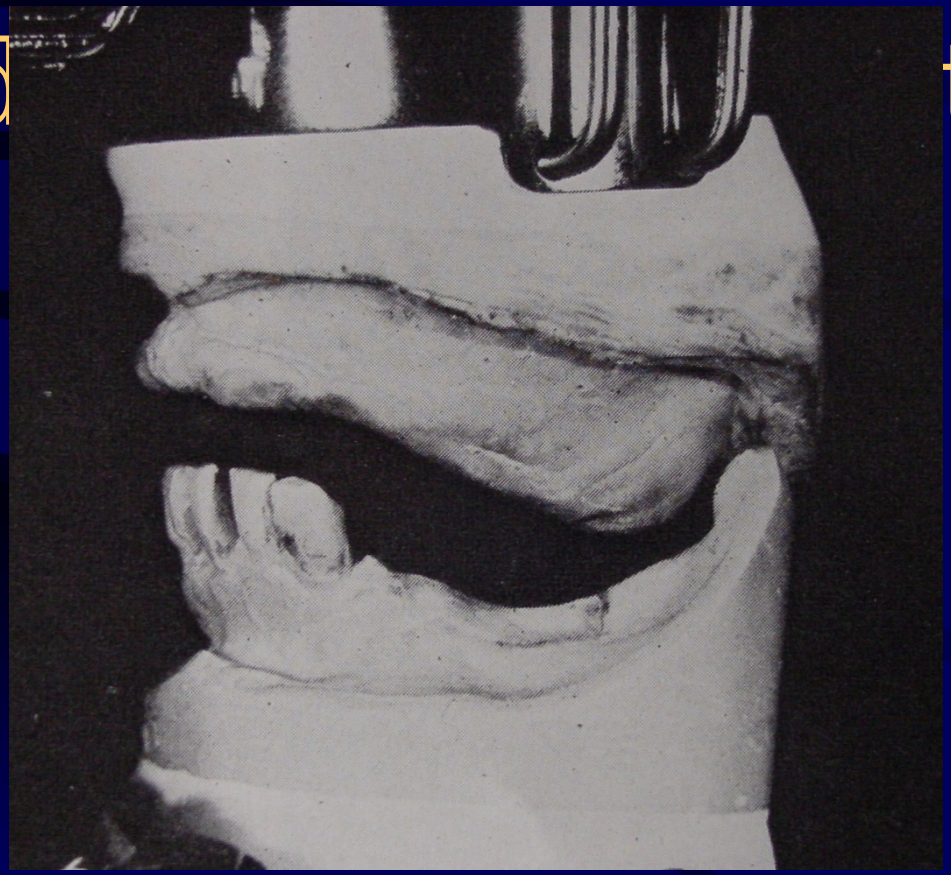
- Combination Syndrome: a descriptive term recognizing five characteristic changes occurring within time and often in a combined case
  - a mandibular removable bilateral distal extension partial denture opposing a maxillary complete denture.

1. Resorption of the premaxilla

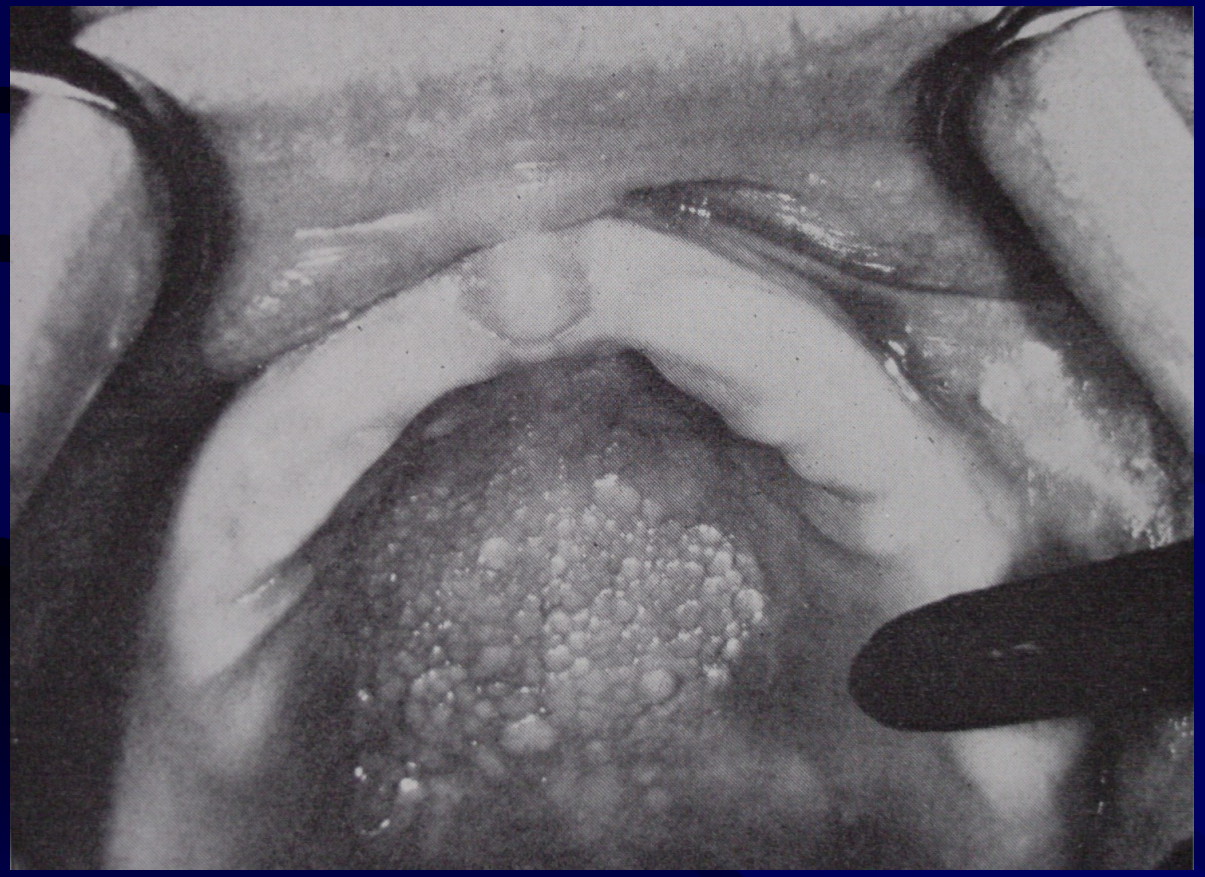


Hypertrophy/downgrowth of the maxillary tuberosities

3. Extrusion of the mand teeth

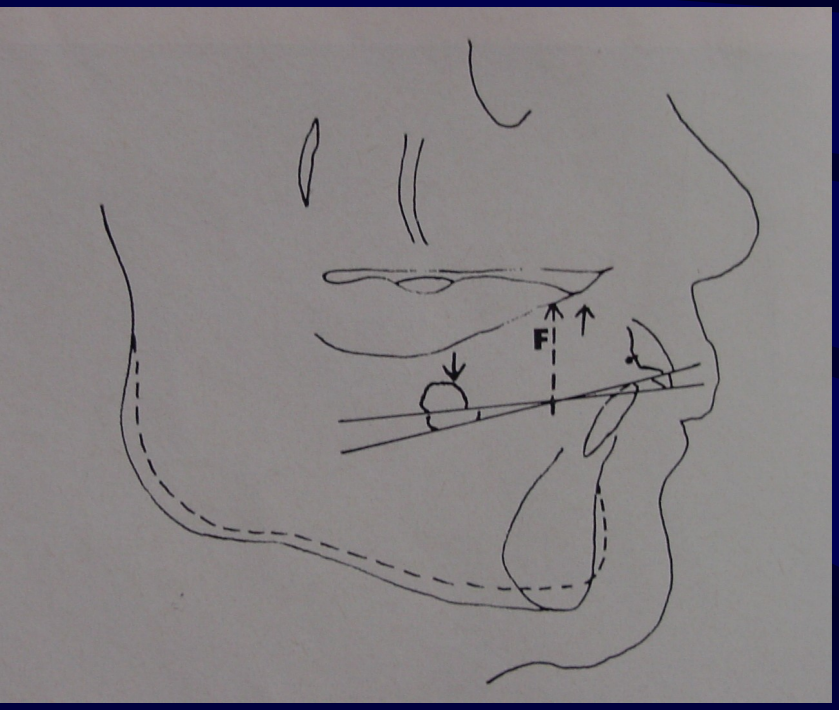


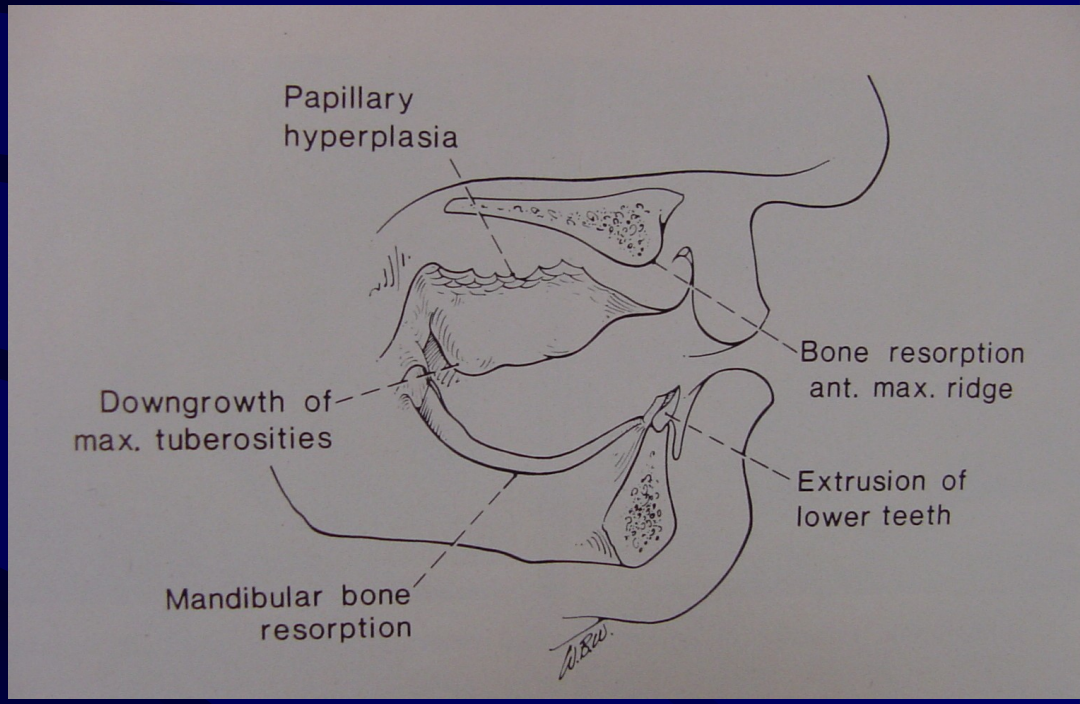
4. Papillary hyperplasia in the palate



5. Loss of bone beneath the removable partial denture

According to Kelly:

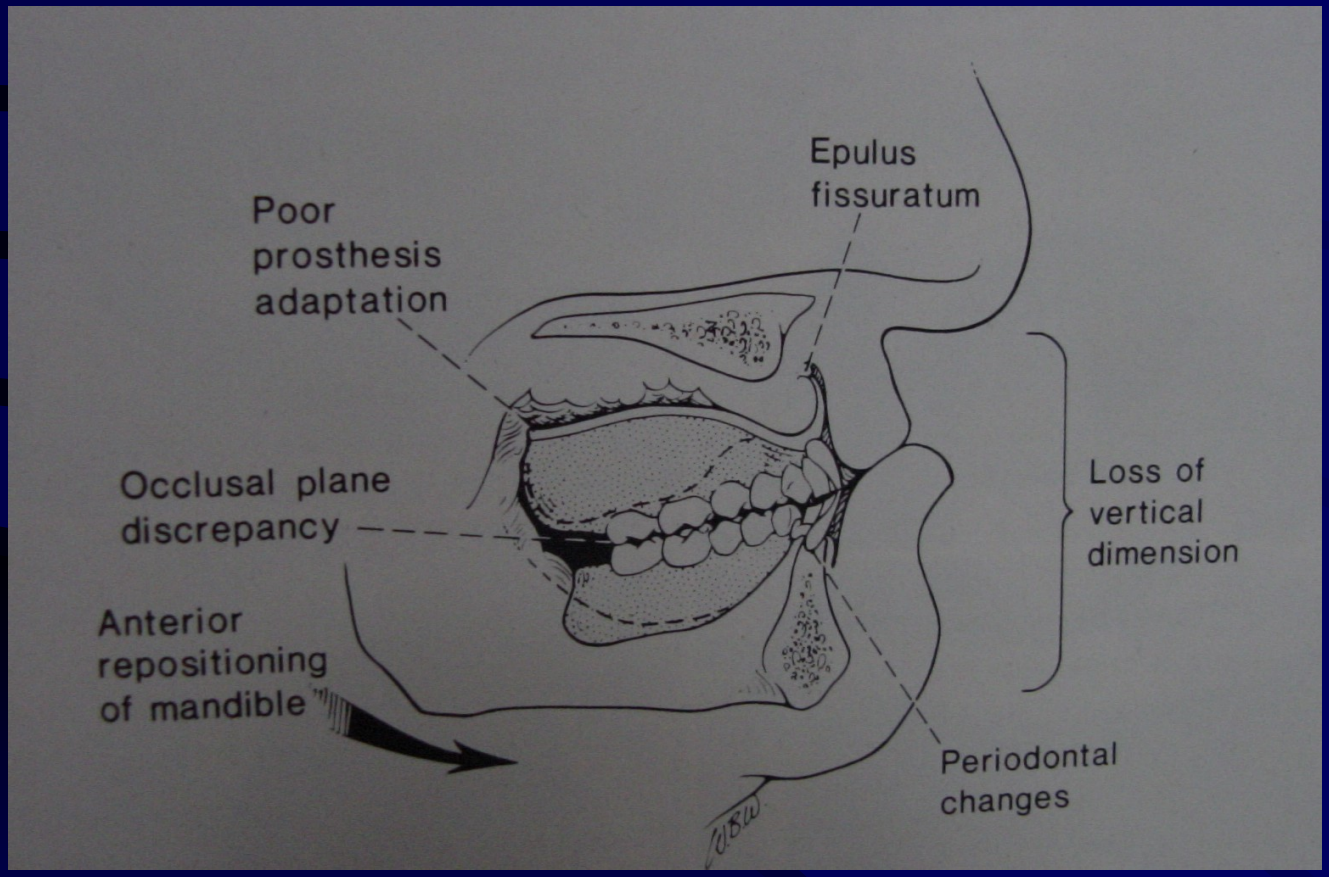


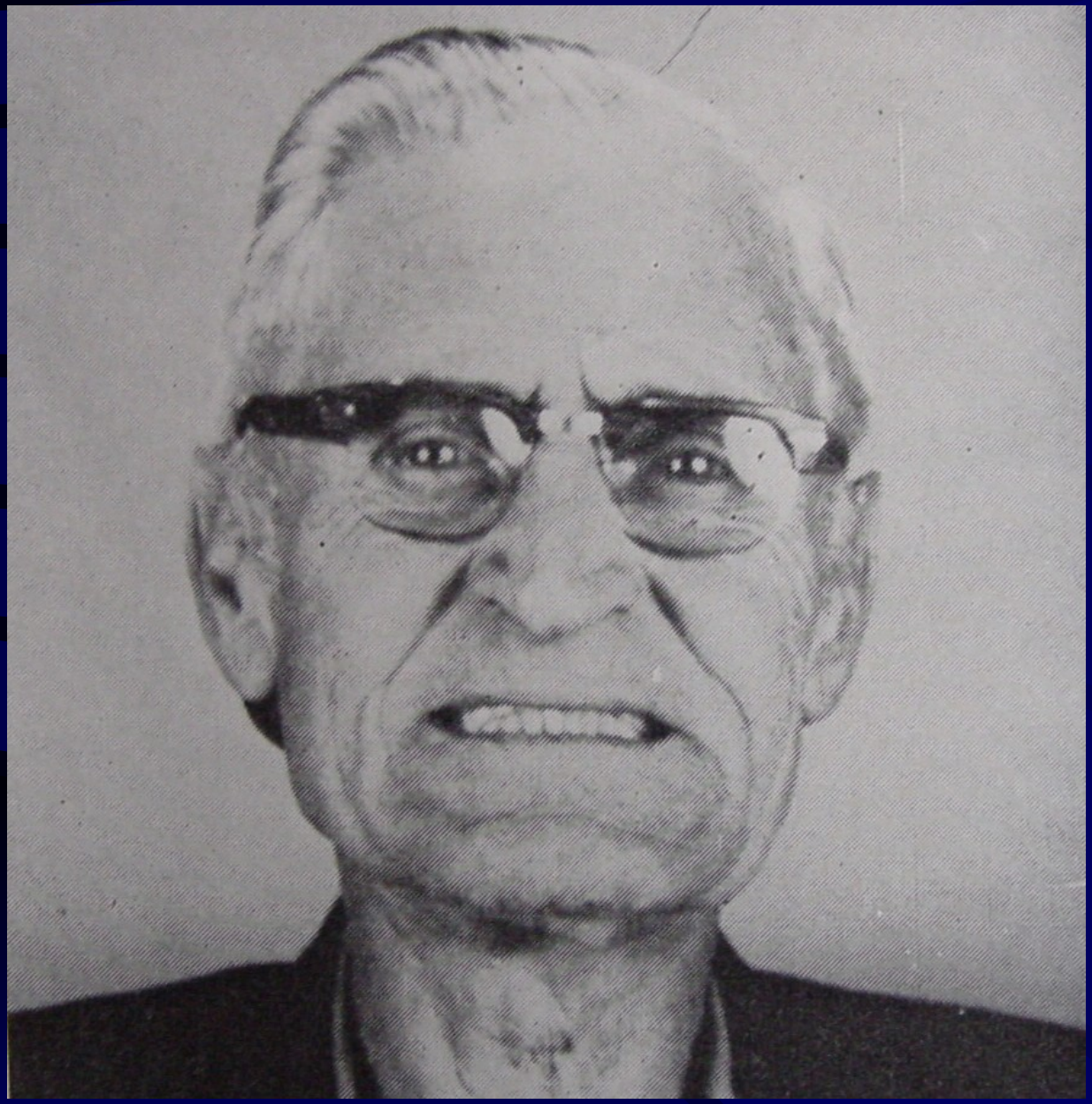


Saunders *et al*: The maxillary complete denture opposing the mandibular bilateral distal-extension partial denture: Treatment considerations. J Prosthet Dent (1979)

- Identified six associated changes that may also occur in patients with Combination Syndrome.

According to Saunders *et al:*





Shen K, Gogloff RK: **Prevalence of the combination syndrome among denture patients.** J Prosthet Dent(1989)

- **24%** of patients who have natural mandibular anterior teeth opposing complete maxillary dentures.
- Patients with maxillary complete dentures opposing mandibular RPD with at least one mandibular molar did not show the combination syndrome.

Predisposing factors:

- Extraction history
- Quality and use of the prostheses
- Parafunctional habits
- Angle Class III jaw relationship
- Systemic diseases: diabetes, osteoporosis

Treatment and Prevention

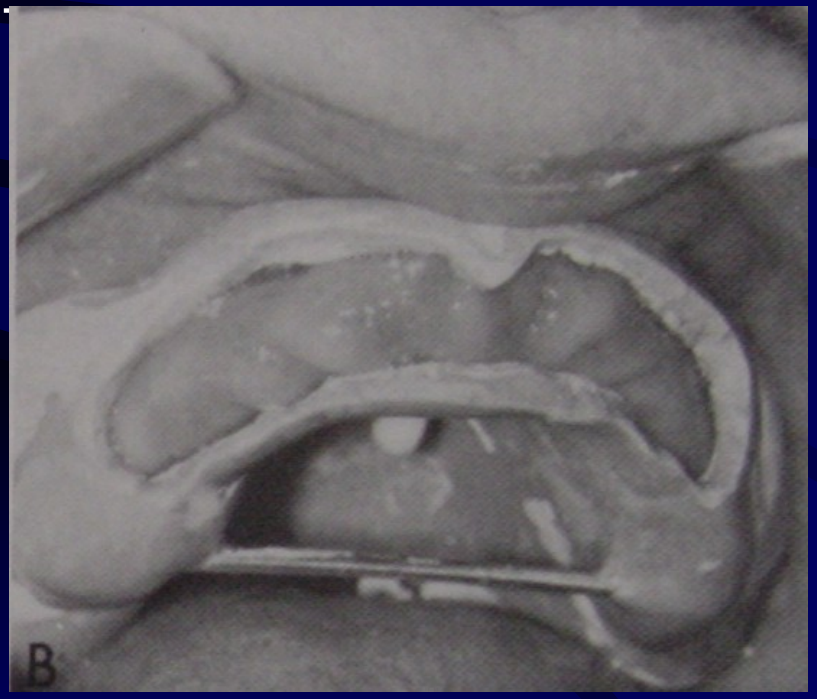
- GOAL: Preserve alveolar support, restore esthetics, phonetics and function
- Tissue-conditioning, oral massage, remove denture for at least 8h daily
- Diagnostic wax-up

Treatment (cont'd)

- Pre-prosthetic surgery
  - Tuberosity reduction
  - Papillary hyperplasia
  - Epulis fissuratum
  - Segmental osteotomy, posteriorly reposition mandible

Treatment (cont'd)

- Impression technique - selective pressure, open tray, altered cast techniq



Treatment (cont'd)

- Mandibular RPD - positive occlusal support from the remaining natural teeth, maximum coverage of the basal seat beneath the distal extension bases - cover retromolar pads and buccal shelf

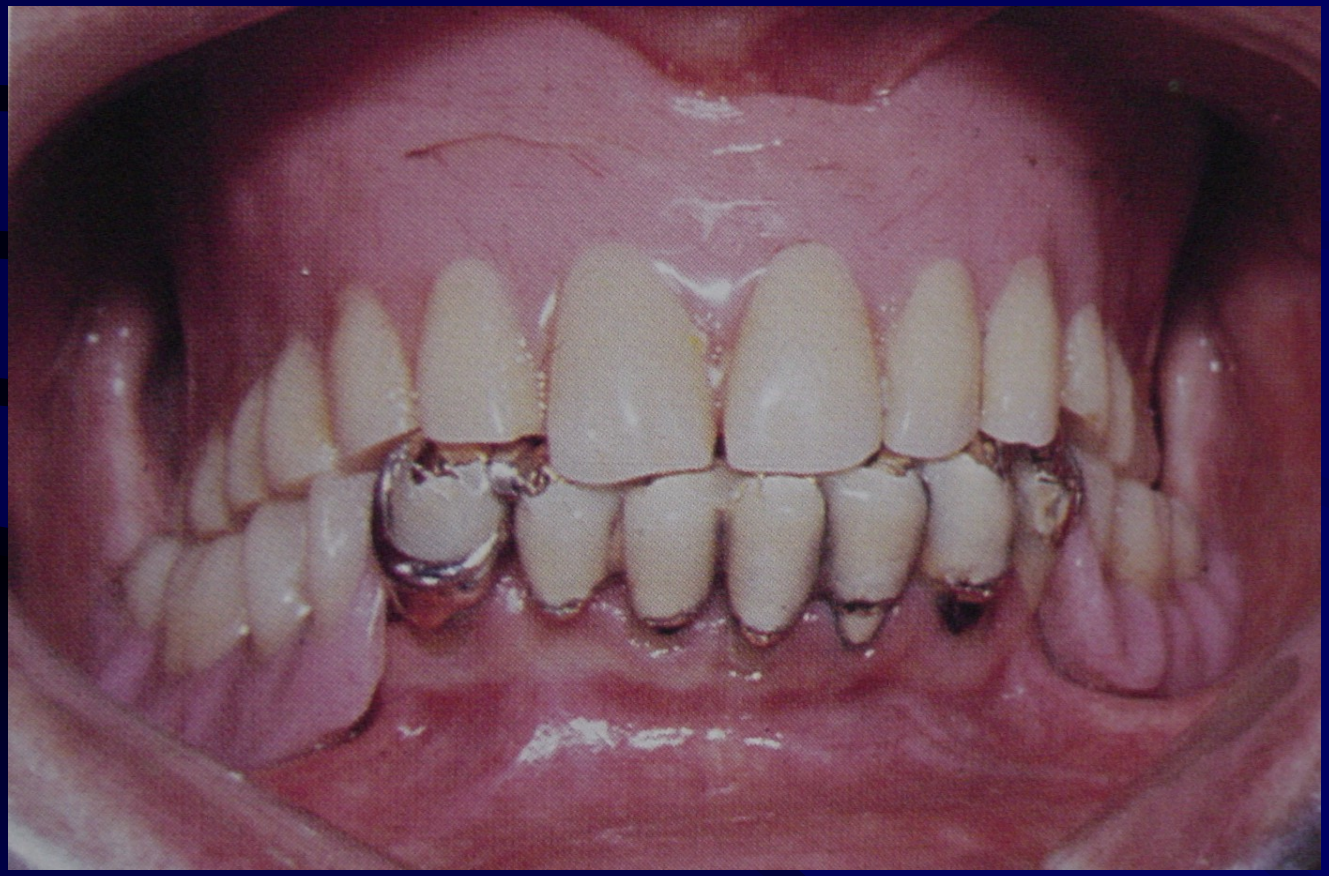
Treatment (cont'd):

- Occlusion:
  - Correct plane of occlusion discrepancies and vertical dimension problems.
  - Anterior: cosmetic and phonetic only - no incisal contact of the anterior teeth in CR and minimal contact in eccentric providing posteriors maintain contact.

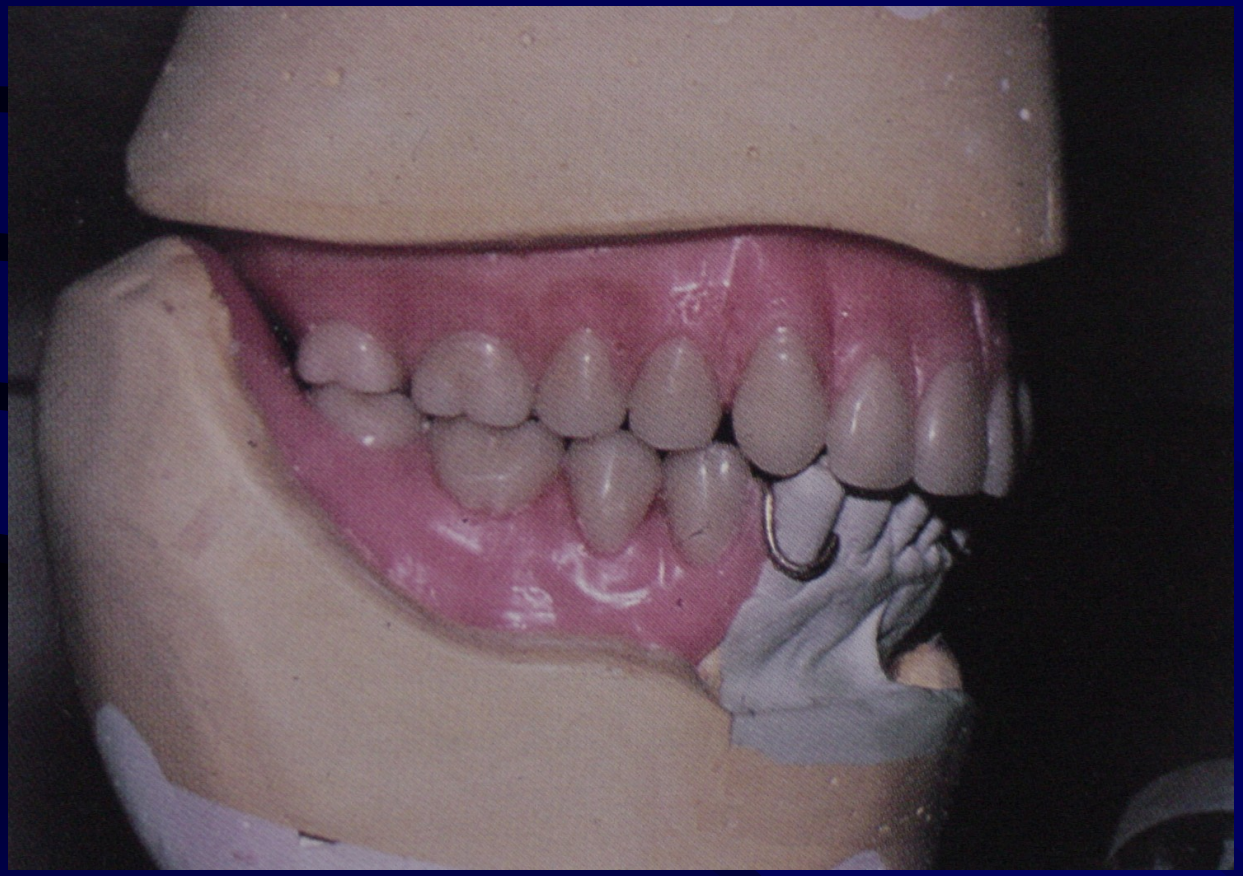
Treatment (cont’d)

- Occlusion
  - Posterior: Bilateral balance. Metal occlusal surfaces .

Avoid traumatic edge-to-edge contact



Posterior occlusal contact, but no contact anteriorly



Treatment (cont'd)

- Educate patient - OH, care of prostheses, leave prostheses out of mouth at least 8 hrs daily. Emphasize importance of recall, maintenance, awareness of parafunctional habits.

Maintenance is crucial

- Goal: Limit initial bone loss and preserve remaining bone.
- Most resorption during the first year of functional use.
- Recall: 24 hr, 1 wk, 1 mo., 3 mo., 6 mo., 1 yr., and q6m after.
- Evaluate comfort, function, retention and stability of prostheses

Maintenance (cont’d)

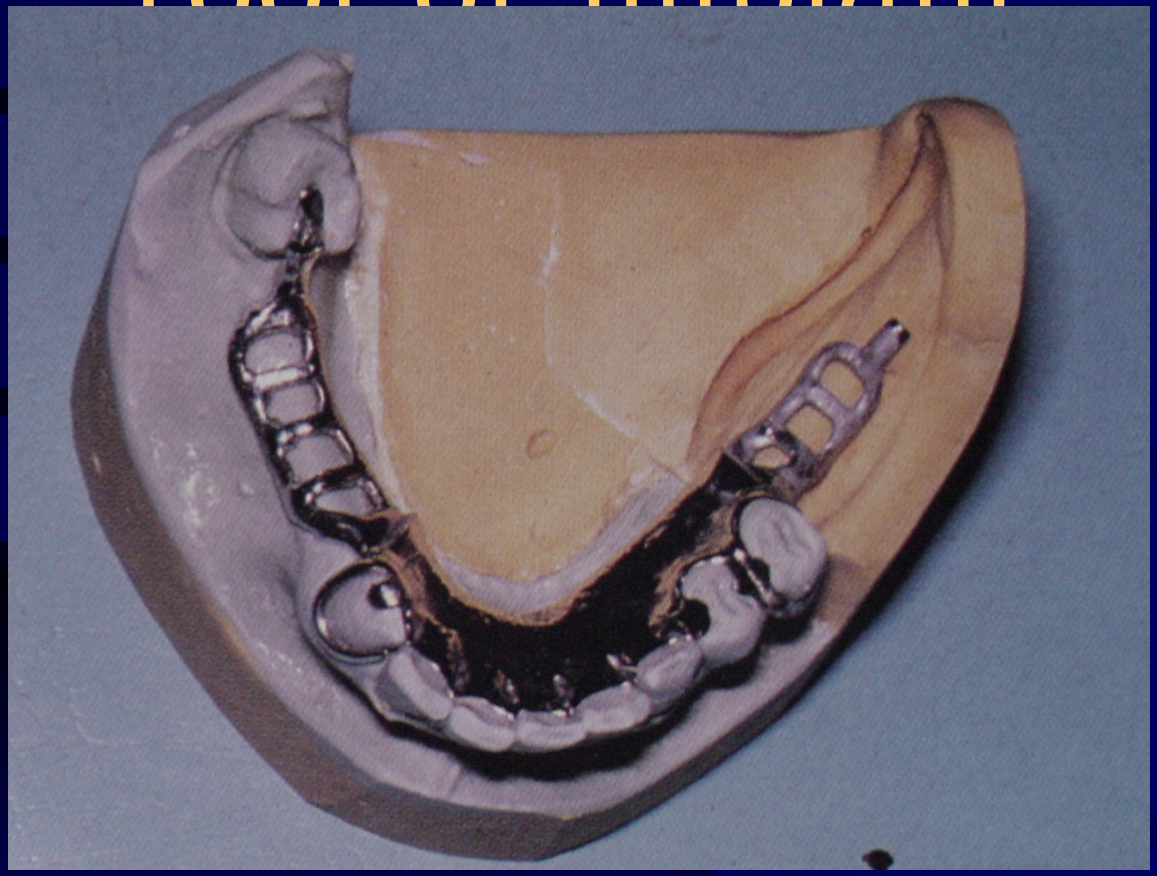
- Verify intimate contact in all primary stress bearing areas
- Verify VDO, VDR, CR=MI
- Clinical remount
- Assess the need for relining, if alveolar resorption has occurred.
- Reinforce OHI

Explore other treatment modalities.

- Avoid the combination of a complete maxillary denture and mandibular distal extension RPD, if possible:

Preserve bone in premaxilla: Preserve roots/ implants

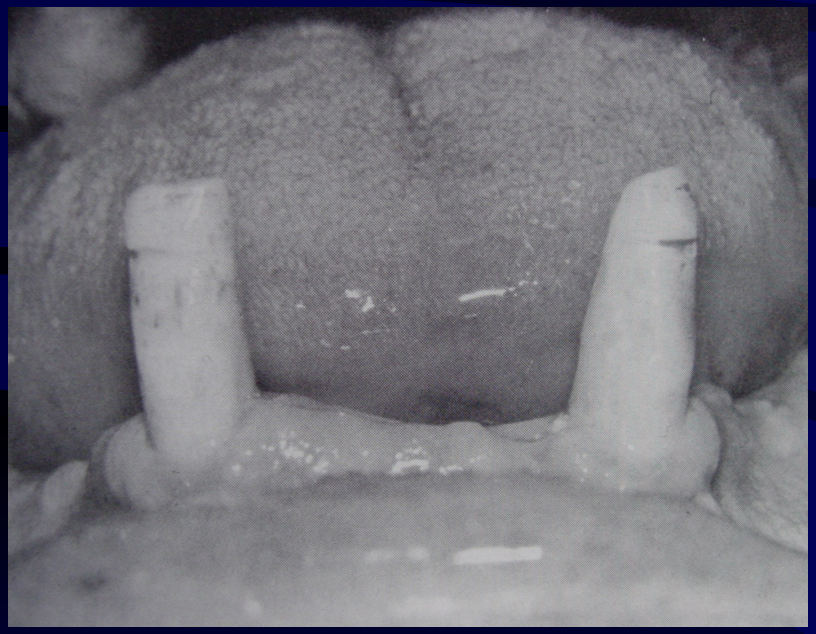
Preserve mandibular posterior support - tooth, root or implant

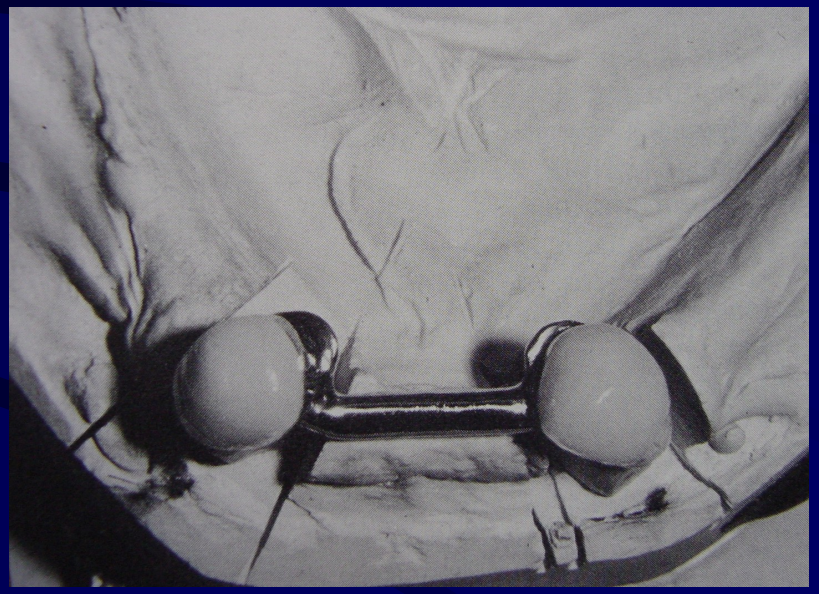


Prevent excessive eruption of mandibular anterior teeth and supporting bone - Swing

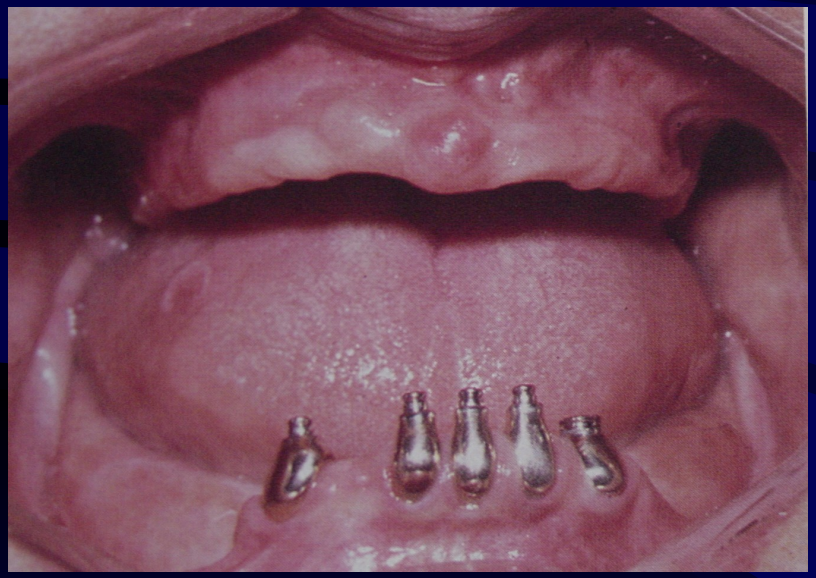
Mandibular FPD

Mandibular splint bar - supporting RPD





Mandibular overdenture



GOALS

- Preserve alveolar support and prevent resorption
- Occlusal harmony
- Healthy tissue
- Esthetics, phonetics and function

QUESTIONS?